

STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3



Stream ID: S-F11	Crossing Start Date: 02/15/2024	Crossing Completion Date: 02/26/2024
Milepost: 269.7	Pre-Con Assessment Date: 02/09/2024	Post-Con Assessment Date: 03/05/2024
Station: 14240+15	Stream Classification: Perennial (Perennial, Intermittent, Ephemeral)	Bankfull Width (ft.): 90
County: Franklin	303(d) Impairment Listing: Impaired	Riffle:Pool Complexes Present? No

Item #	Resource Crossing Conditions	N/A	YES	NO
1.	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u>Yes</u> Fish Relocation? <u>Yes</u> Mussel Relocation? <u>Yes</u>		X	
2.	Is this resource designated a wild or stockable trout stream?			X
3.	Which crossing methods were utilized during the stream crossing? <i>(Select one or more)</i> Dam & Pump, Flume, Cofferdam, Conventional Bore, Horizontal Directional Drill (HDD) Bore?		Dam & Pump	
4.	Was the top 1-foot (12-inches) of streambed substrate segregated and stockpiled separate from trench spoils?		X	
5.	Was excess material not needed for backfill removed and disposed of in an upland area?		X	
6.	Was the top 12-inches of backfill made with clean native stream substrate?		X	
7.	Was the pre-construction survey data provided and utilized during restoration in attempt to re-establish pre-construction contours?		X	
8.	Were any field modifications to the stream implemented by project or regulatory personnel to address potential drainage or bank restoration limitations?		X	
9.	Were impervious trench breakers/plugs properly installed within 25-feet of top-of-bank to prevent subsurface erosion to or from the resource area?		X	
10.	Was permanent seed and stabilization material (straw or matting) applied to riparian areas and stream banks prior to re-establishing flow to the impact area of the channel?		X	
11.	Was the time of disturbance minimized by conducting resource work continuously to completion?		X	
12.	Have civil surveys been scheduled to verify as-built conditions meet pre-construction conditions in accordance with the project Mitigation Framework and federal/state permit requirements?		X	
13.	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 – 4/30)?		X	
14.	Did any unauthorized discharges to unpermitted resources occur during the crossing? If so, explain the corrective actions implemented in the Comments section and include additional photos.			X

Item #	Biological Conditions	Pre-Con	Post-Con
15.	Predominant Substrate Type (select one): <i>Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay</i>	Cobble (2-10")	Cobble (2-10")
16.	Channel Conditions: Rating: 1-Optimal (80-100% stable banks), 2-Suboptimal (60-80% stable banks), 3-Marginal (40-60% stable banks), 4-Poor (20-40% stable banks), 5-Severe (0-20% stable banks, highly eroded or unvegetated banks)	2 - Suboptimal	1 - Optimal
17.	Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank: Rating: 1-Optimal (60-100% heavy vegetative cover), 2-Suboptimal (30-60% mixed vegetated coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetated coverage, etc.)	1 - Optimal	4 - Poor
18.	Instream Habitat Conditions: Examples: Varied substrate sizes, varied combination of water velocities/depths, presence of woody/leafy debris, stable substrate with low amount of mobile particles, low embeddedness, shade protection, undercut banks, root mats, submerged aquatic vegetation. Rating: 1-Optimal (Habitat conditions present in >50% of resource), 2-Suboptimal (Habitat conditions in 30-50% of resource), 3-Marginal (Habitat conditions in 10-30% of resource), 4-Poor (Habitat conditions in 0-10% of resource)	1 - Optimal	1 - Optimal
19.	Channel Alterations: Examples: Straightened channel, non-MVP stream crossings, non-native riprap/rock along banks, concrete/gabions/concrete block, manmade embankments, constrictions w/in channel, livestock or agricultural impacts. Rating: 1-Negligible (unaltered/natural stream), 2-Minor (20-40% of resource disrupted by channel alterations), 3-Moderate (40-80% of resource disrupted), 4-Severe (>80% of resource disrupted)	2 - Minor	4 - Severe

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Comments/Remarks

12-15-23: The pre-construction meeting was conducted. The MVP EI is Keith Davis, and the Precision Pipeline foreman is Kevin Greene. During the meeting, the dewatering structure, water management, and fish relocation were discussed. The fish relocation will take place first, after the bridge is installed across the resource. The mussel relocation was already conducted. This will be an open cut and a bladder dam will be used to control the water flow. Three 24-inch pumps will be utilized for the dam and pump. -D. Fraise

01-03-24: The pump was set in the resource for a test. No active work took place. -D. Fraise

01-04-24 - 01-05-24: Equipment was transported to the site. -D. Fraise

01-06-24 – 02-08-24: The site was not active. -D. Fraise

02-09-24: The pre-construction meeting was conducted. The MVP EI is Keith Davis, and the Precision Pipeline foreman is Kevin Greene. During the meeting, the dewatering structure, water management, and fish relocation were discussed. The fish relocation will take place first, after the bridge is installed across the resource. The mussel relocation was already conducted. This will be an open cut and a bladder dam will be used to control the water flow. Six 24-inch pumps will be utilized for the dam and pump. The bridge was installed across the resource, and the pumps were installed in the stream. -D. Fraise

02-10-24: The six 24-inch pumps were installed in the resource. -D. Fraise

02-12-24: The wiring for the pumps were set up, and the dewatering structure was constructed. Pylon was added to hold up the pipes in the resource. The pipe for the pump around was welded. -D. Fraise

02-13-24: Two pipes for the 24-inch pump around were bend and pushed against trees on the left bank due to the water pressure. The crew is excavating a small utility trench in upland area to bury the pump around pipes. The pipes were cut and welded, and the pipe was backfilled. The vegetation was cut on the left bank to allow the wiring to reach the power supply for the pumps. -D. Fraise

02-14-24: The crew continued to set up the wiring for the pump around. During the process of straightening out the two pipes, an excavator entered the 10-foot buffer zone prior to topsoil removal. The topsoil was regraded as excavator exited out with the bucket. Debris was removed from the hoses located in the river. The pump arounds were tested. -D. Fraise

02-15-24: Continued working on the pumps. The pumps were functioning. Geotech plastic and sandbags were installed on the right bank for the pump around discharge. Sheet piling was applied to approximately 25% of the resource. The crew discovered bedrock that will require blasting. A turbidity curtain was installed along the right stream bank. The topsoil was removed from the 10- and 50-foot buffer zone, stockpiled in the upland, and stabilized with mulch. Excavation began. -D. Fraise

02-16-24: The topsoil was excavated from the left bank and the 50-foot buffer zone, stockpiled in the upland, and stabilized with mulch. The topsoil was excavated from the 10-foot buffer and stockpiled. The right bank was drilled and tested for blasting. Blasting commenced on the right bank's 50-foot buffer and upland. No impacts or unauthorized discharges were observed -D. Fraise

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02-17-24: The left bank was drilled and blasted. A temporary bridge was installed. Due to the strength of the current, steel plates were installed instead of plastic sheeting. The bell hole was excavated in the upland on the right side. Additional Geotech was installed on the right bank for added erosion control. Two additional metal plates were added to the resource on the discharge side to prevent scouring. The middle of the sheet piling was removed to alleviate some of the pressure on the stream bank. The pumps were tested and were not able to keep up with the resource's flow. The VFD was turned off for the pump around system. The discharge pipe was cut to expand the capacity of the water flow from the pipe. -D. Fraise

02-18-24: The bedrock in the stream was hammered. A 3-inch pump was used to transport water from the dewatering structure into the sump. After filtration, the water was released back into the stream. The resource was dammed with sheet piling to test the pumps. Metal plates and a sandbag dam were installed at the pump around's discharge. Additional topsoil was excavated from the left bank where the pumps and wiring are located. The fish relocation was not able to be completed. The metal plate was removed downstream to allow for water flow. -D. Fraise

02-19-24: Two 6-inch pumps were connected to a filter bag to dewater the resource so that blasting can occur. Plastic was installed to the sheet piling to seal off the water flow. The first bladder was installed in from the of sheet piling. Two 3-inch pumps were utilized to fill up the bladder. The 6-inch pumps used for dewatering were replaced with two 8-inch pumps. Plastic and sandbags were added to the downstream dam. The resource was dewatered, and the fish relocation occurred. The temporary bridge was removed. The crew removed as much substrate as possible due to bedrock. The top 12 inches of substrate was stockpiled on a wooden pallet that is covered in Geotech. Drilling began in the 10-foot buffers, stream banks, and the streambed. A dam was built under the bridge to contain the water that is leaking into the resource. -D. Fraise

02-20-24: Drilling right 10 feet buffer to blast and a small portion of river bed. Pump around operational, and blasting took place with no issues. Excavation of area that was blasted but during excavation water begin to flood work space. Crews connected 8 inch pump to pump water down through the dewatering structure. Too much water for dewatering structure to handle, so requested variance to build another dewatering structure. Crews decided they will build additional dewatering structure in morning, and the existing dewatering structure is holding water being pumped through due to cutting down pump velocity. Water from dewatering is still coming out too rapidly and starting to saturate bank. Dewatering was cut off, and pump around will be manned all night. -D. Fraise

02-21-24: The crew continued the excavation of the blasted area in the river bed of the resource crossing. The six 24" pumps are in place and operational to move water from bladder dam. The crew also set up temporary 8" pumps to begin dewatering the infiltration of the open cut. An additional dewatering structure will soon be put into place. Pipe lowered into trench and backfilling began. - A. Bailey

2-22-24: The topsoil was segregated and restored. A turbidity curtain was installed. The right bank was covered in Curlex and restored. New erosion control devices were installed, and the streambed was restored. The crew prepared to remove the backflow dam. The stream substrate was restored, and the sheet piling was removed. Normal flow was returned to the resource with no impact to the biological conditions observed. -T. Turner Jr.

02-23-24: The sandbags were removed from the resource. Sediment from the dewatering structure was removed by hand with buckets. The light plants were removed. Some of the sandbags were stuck under the bridge in the resource and will be removed when the bridge is removed. The VFD was removed from the bank, and the 24-inch pumps were removed. -D. Fraise

02-24-23: DEQ was onsite. The left bank contours were restored with stockpiled topsoil. The banks were seeded and stabilized with Curlex. The test leads were installed, and the Coming In Side (CIS) upland areas of the trench was padded and backfilled. The Going Away Side (GAS) was x-rayed, blasted, and coated. The crew began the final weld.

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The bridge was cleaned, and the erosion control devices were restored. The 50-foot buffer was established. The bridge is scheduled to be removed on Monday, 02/26. -K. Douglas

02-25-24: The site was inactive. -D. Fraise

02-26-24: The bridge was removed, and the second trench breaker was installed in the upland area. The topsoil was restored on both sides of the resource in the buffer zone where the bridge was located. The upland soil was restored, and trash was removed from the site. All metal plates and sandbags were removed from the resource. -D. Fraise

02-27-24: The equipment was removed from the site. The upland on the GAS was backfilled. -D. Fraise

02-28-24: The pump around pipes were removed, and equipment continued to be removed from the site. -D. Fraise

02-29-24: Straw mulch was applied to the left bank. Equipment continued to be removed from the site. -D. Fraise

03-01-24: Riprap was installed on the 10-foot buffer zone and the 50-foot buffer zone on the right bank. -D. Fraise

03-02-24: Continued removal of equipment from the site. -D. Fraise

03-04-24: Riprap was installed on the 10- and 50-foot buffer zone on the left bank. Topsoil was returned to the previous bridge location in the 50-foot buffer zone. Super silt fence was installed on the left bank. -D. Fraise

03-05-24: Erosion control matting was installed on the upland soil. Post-construction auditor assessment was completed. -D. Fraise

03-06-24: The site is inactive. The erosion control devices and stream were inspected. -D. Fraise

03/07-16/2024: Auditor coordination with MVP environmental team regarding installation of rip rap channel protection and restoration considerations. If additional in-stream work activity is needed, a new auditor assessment and report will be completed.

Item #8: Modification to left and right banks due to installation of rip rap for long term channel scour protection.

Impacts to riparian buffer zone vegetation and channel alterations were observed. No unauthorized discharges were observed during the crossing activities.

In accordance with the Mountain Valley Pipeline Consent Decree, Case No. CL18006874-00, (Issued October 11, 2019) this independent report was completed to document the on-site monitoring of instream invertebrate and fisheries resources during all construction activity related to waterbody and wetland crossings, and document instream conditions and any impacts to the resources.

<i>This report was written by</i>	Darrell Fraise <hr style="width: 80%; margin: 0 auto;"/> <i>Print Name</i>	 <hr style="width: 80%; margin: 0 auto;"/> <i>Signature</i>	03/16/2024 <hr style="width: 80%; margin: 0 auto;"/> <i>Date</i>
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Required Photos



Photo Description: Downstream view of permitted impact area during pre-construction assessment.



Photo Description: Conditions of the downstream area outside the ROW during pre-construction assessment.



Photo Description: Downstream view of permitted impact area during post-construction assessment.

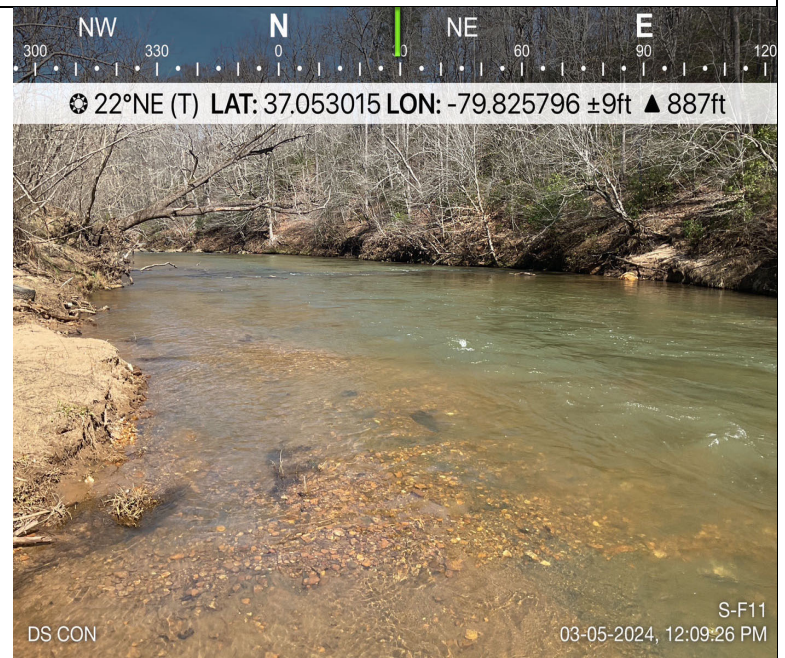


Photo Description: Conditions of the downstream area outside the ROW during post-construction assessment.

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Optional Additional Photos



Photo Description: The fish relocation was conducted after installation of the dam and pump around.



Photo Description: An overview of one of the the dewatering structures used on-site during the crossing.

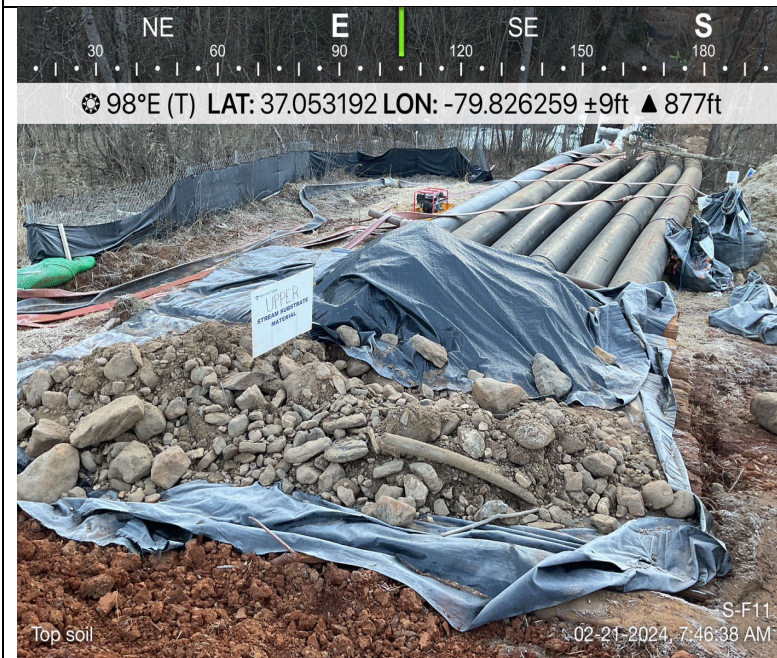


Photo Description: The top 12" of stream substrate was stockpiled on Geotech fabric during the crossing activities.

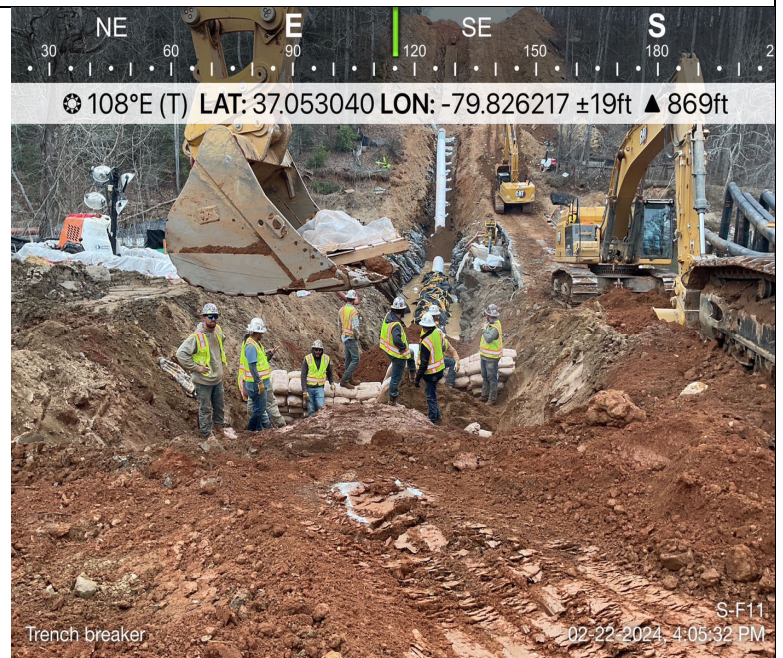


Photo Description: The trench breaker was installed around the pipe on the GAS & CIS of the resource.